

What is claimed is:

- 1     1.     Apparatus comprising:  
2             a coupling face that couples with a coupling face on a portable device during  
3     docking of the portable device;  
4             a connector provided on said coupling face to connect with a connector of the  
5     portable device upon coupling therewith;  
6             a guide member provided adjacent said coupling face and which guides the  
7     portable device into position during said docking; and  
8             mechanism operatively associated with said guide member for changing the  
9     position of said guide member relative to said coupling face in accommodation of  
10    differing portable devices.
  
- 1     2.     Apparatus according to Claim 1, wherein the portable device is a portable  
2     personal computer, said coupling face engages the base of the portable personal  
3     computer, and said guide member engages the back face of the portable personal  
4     computer.
  
- 1     3.     Apparatus according to Claim 1, wherein said guide member comprises a  
2     first guide face fixed to the apparatus and a second guide face storably provided  
3     between said first guide face and said connector of the apparatus.
  
- 1     4.     Apparatus according to Claim 3, wherein said second guide face is provided  
2     on a member that can be rotated about a rotation axis parallel to said coupling face  
3     and stored under said coupling face.
  
- 1     5.     Apparatus according to Claim 3, wherein said second guide face is provided  
2     on a member capable of being stored under said coupling face by being moved in  
3     a direction intersecting said coupling face.

1 6. Apparatus according to Claim 1, wherein said guide member has a flap  
2 capable of being rotated so that one end of said flap faces in a direction opposite  
3 to the direction in which said coupling face faces; one end of said flap constituting  
4 the whole or part of said guide face; and the other end of said flap being connected  
5 to said member through a rotary shaft for said rotation.

1 7. Apparatus according to Claim 1, wherein said guide member further  
2 comprises a movable portion on which said guide face is provided and which is  
3 mounted so as to be movable in the direction of intersection with said guide face,  
4 and wherein said mechanism comprises a pusher which applies an urging force to  
5 said movable portion so that said guide face moves in the direction of said  
6 connector of the apparatus, and a positioner which positions said movable portion  
7 by stopping said movable portion at one of at least two predetermined positions of  
8 said movable portion in the direction of movement of said movable portion against  
9 said urging force.

1 8. Apparatus according to Claim 7, further comprising a release which releases  
2 said movable portion from the state of being stopped by said positioner according  
3 to the coupling between said coupling face and the mated coupling face to enable  
4 said guide face to be moved in the direction of said connector of the apparatus in  
5 a case where said portable device is a predetermined model.

1 9. Apparatus according to Claim 8, wherein said release has a model detecting  
2 projection provided on said coupling face, said projection being depressed by the  
3 mated coupling face of a predetermined model of the portable device at the time of  
4 docking, said projection being not depressed at the time of docking of a different  
5 model of the portable device because a recess is provided in the corresponding  
6 portion of the mated coupling face.

1 10. Apparatus according to Claim 7, wherein said pusher includes a translating

2 member mounted on a stationary portion of the apparatus so as to be movable in  
3 directions substantially parallel to said guide face and said coupling face, a tensile  
4 coil spring provided between said translating member and said stationary portion,  
5 and a pair of rotating members each rotatably connected to said translating member  
6 and said movable member so as to form a parallel link including said translating  
7 member and said movable member as nodes.

1 11. Apparatus according to Claim 7, wherein said pusher includes a pair of lever  
2 members intersecting each other in an X-shaped form and rotatably connected to  
3 each other, and a tensile coil spring provided between ends of said two lever  
4 members, said lever members being rotatably mounted at their point of intersection  
5 to a stationary portion of the apparatus, the other ends of said lever members being  
6 mounted to said movable portion so as to be rotatable and movable along the  
7 lengthwise directions of the members.

1 12. Apparatus according to Claim 10, wherein said movable portion has a flap  
2 capable of being rotated so that one end of said flap faces in a direction opposite  
3 to the direction in which said coupling face faces; one end of said flap constituting  
4 the whole or part of said guide face; the other end of said flap being connected to  
5 said member through a rotary shaft for said rotation; each rotating member having  
6 a projection outside the position at which it is mounted to said movable portion; and  
7 said projection being positioned at such an angle as to be parallel to a rotation axis  
8 of said flap and in such a position as not to obstruct the rotation of said flap when  
9 said guide face is in a predetermined position remote from said connector of the  
10 apparatus, and is positioned so as to have a predetermined angle from the rotation  
11 axis of said flap, to support said flap and to check the rotation of said flap when said  
12 guide face is in a predetermined position closer to said connector of the apparatus.

1 13. A docking-type function-providing apparatus for providing a predetermined  
2 function to a portable device docked with the apparatus via their respective

3 connectors, comprising:

4 a stationary portion in which an electronic circuit for providing the

5 predetermined function is provided;

6 a coupling face which is fixed on said stationary portion and to which a

7 bottom face of the portable device is coupled;

8 a hook-like member provided on said coupling face and engaged with a

9 mated engaging portion of the portable device to effect said coupling;

10 said connector of the apparatus provided on said coupling face to connect

11 with said connector of the device by said coupling;

12 a push plate provided on said coupling face to push and open a cover for

13 protection of said connector of the apparatus at the time of said connection;

14 a connector guide provided on said coupling face to guide said connector of

15 the device so that said connector of the device is aligned with said connector of the

16 apparatus;

17 a positioning projection provided on said coupling face to position a bottom

18 face of the portable device on said coupling face;

19 a movable portion having a guide face for guiding a back face of the portable

20 device at the time of docking, capable of moving on said stationary portion in a

21 direction perpendicular to said guide face, urged toward said connector of the

22 device by an urging force, and capable of being positioned at any of a plurality of

23 positions against said urging force;

24 a guide plate provided on said guide face to guide the portable device at the

25 back side in directions parallel to said guide face and said coupling face;

26 an eject button for release from the engagement by said hook-like member;

27 an ejecting member for disconnecting said connectors in such a manner that

28 said ejecting member is caused to project above said coupling face according to

29 depression of said eject button to push upward the bottom face of the portable

30 device upward;

31 a model detecting projection provided on said coupling face, said projection

32 being depressed by the mated coupling face of a predetermined model of the

33 portable device at the time of docking, said projection being not depressed at the  
34 time of docking of a different model of the portable device because a recess is  
35 provided in the corresponding portion of the mated coupling face; and  
36 a flap provided on said movable portion so as to constitute said guide face  
37 and to be rotatable so that its end portion on the guide face side is moved  
38 downward when said movable portion is in a rear position.

1 14. A portable device capable of being docked with the apparatus according to  
2 Claim 9, said device comprising a recess according to Claim 9.